STORM WATER MANAGEMENT PROGRAM
DRAFT

UPDES Permit No. UTS000001

Submitted to:

State of Utah
Department of Environmental Quality
Division of Water Quality
Co-permit with Jordan Valley Municipalities

Submitted by:

Sandy City Public Utilities
10000 S. Centennial Parkway
Sandy, UT 84070

March 2015

TABLE OF CONTENTS

ACRONYMS

A.B.O.P.	Antifreeze, Batteries, Motor Oil, and Paint
BMP	Best Management Practice
CWA	The Clean Water Act of 1987
CPODOS	Common Plan of Development or Sale
DEQ	Department of Environmental Quality
DWQ	Division of Water Quality
EPA	United States Environmental Protection Agency
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
LID	Low Impact Development
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAD	North American Datum
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
PUAB	Sandy City Public Utilities Advisory Board
SLCO	Salt Lake County
SOP	Standard Operating Procedure
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Program
UCGP	Utah Construction General Permit
UPDES	Utah Pollution Discharge Elimination System
USWAC	Utah Storm Water Advisory Committee

DELEGATION OF AUTHORITY

Utah Department of Environmental Quality
Division of Water Quality
195 North 1950 West
DEQ 3rd Floor
Salt Lake City, Utah 84116

Dear Executive Director:

As the ranking elected official of Sandy City, I hereby authorize Tyler Shelley, P.E., Senior Engineer, Sandy City Public Utilities acting as the Sandy City MS4 Program Manager to act on my behalf relative to documents, reports, notices or activities pertaining to our City's Small MS4 UPDES Storm Water Discharge Permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Respectfully Submitted,

Name:_____

Signature: _____

Title: _____

Date: _____

INTRODUCTION AND OVERVIEW

BACKGROUND

Polluted storm water runoff is often transported to MS4s and ultimately discharged into local rivers and streams without treatment. EPA's Storm Water Phase II Rule establishes an MS4 storm water management program that is intended to improve water quality in the Nation's waterways by reducing the quantity of pollutants that are introduced into storm sewer systems during storm events. Common municipal pollutants include oil and grease, salts and deicing materials associated with transportation; pesticides, fertilizers, and organic refuse from private and commercial landscape maintenance. Sediment and various pollutants from construction site activities and also carelessly discarded trash, such as, paper, plastic bottles and yard waste. When deposited into nearby waterways through MS4 discharges, these pollutants can impair the waterways, thereby discouraging use of the resource, contaminating water supplies, and interfering with the habitat for fish, other aquatic organisms, and wildlife.

In 1990, EPA promulgated rules establishing Phase I of the NPDES storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. The Storm Water Phase II Rule extends coverage of the NPDES storm water program to certain "small" MS4s but takes a slightly different approach to how the storm water management program is developed and implemented.

A Storm Water Management Program should:

- Reduce the discharge of pollutants to the MEP
- Protect water quality
- Satisfy the appropriate water quality requirements of the Clean Water Act
- Allowed to be phased in over a five year period

Storm water management programs must include:

- BMPs for each of the six minimum control measures:
    1. Public Education and Outreach
    2. Public Participation/Involvement
    3. Illicit Discharge Detection and Elimination
    4. Construction Site Runoff Control
    5. Post-Construction Runoff Control
    6. Pollution Prevention/Good Housekeeping
- Measurable goals for each minimum control measure (i.e., narrative or numeric standards used to gauge program effectiveness)
- Estimated completion/implementation dates by which actions to implement each measure will be undertaken, including interim milestones and frequency
- The person or persons responsible for implementing or coordinating the storm water program

PERMIT APPLICATION AND NOI

Phase II Rule requires the development of a storm water management program by requiring an NOI describing the storm water management program to be submitted to the NPDES permitting authority. The Notice of Intent becomes the permit application. The NOI is included on the City storm water website.

Cities required to permit under Phase II are allowed to cooperate and work together with neighboring cities in the application process. The permittee may join with a Phase I city or another Phase II city in applying for a permit. The individual MS4s may share responsibility for program development with neighboring communities and/or take advantage of existing local or state programs.

PERMIT REQUIREMENTS

The chosen BMPs to satisfy the MCMs as required by the regulation of the NOI, become the storm water management program; however, the NPDES permitting authority can require changes in the mix of BMPs, if all or some of them are found to be inconsistent with the provisions of the Phase II Final Rule. Likewise, the permittee can change its mix of these BMPs, if it determines that they are not effective.

The Sandy City SWMP identifies several individual programs that function as the BMPs noted above. The City refers to the BMPs as programs throughout the SWMP documents.

Reports

The permit requires that the city review the SWMP annually, report on activities and make any updates that might be required. The annual reports should use the form provided by the State. Generally, the annual report should include the following information:

- The status of compliance with permit conditions, including an assessment of the appropriateness of the selected BMPs and progress toward achieving the selected measurable goals for each minimum measure;
- Results of any information collected and analyzed, including monitoring data if any;
- A summary of the storm water activities planned for the next reporting cycle;
- A change in any identified BMP or measurable goals for any minimum measure; and
- Notice of relying on another governmental entity to satisfy some of the permit obligations (if applicable).

Record Keeping

Records required by the NPDES permitting authority must be kept for at least 5 years and made accessible to the public at reasonable times during regular business hours. Records need not be submitted to the NPDES permitting authority unless the Permittee is requested to do so.

Schedule

All deadlines for the current permit have passed. An evaluation of the Sandy City MS4 Program was completed by the Utah DWQ on November 5-7, 2014. An evaluation report was received by the City in December 2014 which identified deficiencies and required that the City respond to

the deficiencies with a plan and implementation schedule to bring the program in compliance with the permit. The City submitted to the DWQ on February 4, 2015, the required plan and schedule information. The City is developing and restructuring the SWMP along with an implementation schedule to bring the program into compliance with the permit. See the Implementation Schedule document.

Penalties

The NPDES permit that the operator of a regulated small MS4 is required to obtain is federally enforceable, thus subjecting the Permittee to potential enforcement actions and penalties by the NPDES permitting authority if the permittee does not fully comply with application or permit requirements. This federal enforceability also includes the right for interested parties to sue under citizen suit provision (section 405) of CWA.

SWMP OVERVIEW

This document contains a description of Sandy City's SWMP. The SWMP includes the following:

- Background and Organization
- Programs for each of the six MCMs;

    1. Public Education and Outreach
    2. Public Participation/Involvement
    3. Illicit Discharge Detection and Elimination
    4. Construction Site Runoff Control
    5. Post-Construction Runoff Control
    6. Pollution Prevention/Good Housekeeping

- Supporting documents required for each of the MCMs (including documentation of implementation)
- Standard operating procedures
- Annual reports
- Agreements

The MCM Programs are organized into the six MCM categories and are included in table format. The tables summarize the SWMP and reference all supporting SWMP documents. See MCM Requirements and Program Tables 1 through 6.

HISTORY

Sandy City began as a farming community with few people and widely spaced homes. In the late 1960s and early 1970's, a wave of suburban housing development began creeping into Sandy and by the late 1970's house building reached boom proportions. Between the 1970 Census and the 1980 Census, the City's population had grown from 6,000 to 53,000. The City's population has continued to increase from that time and is now slightly under 90,000. Sandy City is the sixth largest city in Utah.

When Sandy was incorporated in 1893, it covered an area of only one square-mile. Since that time the City boundary has expanded numerous times while annexing several small local

communities. Most of these annexed areas did not have significant drainage systems as was typical with most of the earlier development. Salt Lake County managed all of the storm drain system facilities throughout the City until 1997, at which time Sandy City took over ownership and maintenance of facilities within the City boundary. Storm water detention ponds were not required during much of the earlier development and the City has since constructed several regional detention ponds to manage peak storm runoff flows. In recent years, Sandy has required and continues to require installation of storm drain infrastructure including detention/retention for new development.

Sandy City's storm water collection system today serves about 25 square miles. Elevations in the collection area range from about 4300 feet at the City's western boundary to 5300 feet on the east bench. Much of the storm water in the City is conveyed west through piping, irrigation canals, and ditches to the Jordan River. The major drainage conveyance systems are along 8600 South, 9000 South, 9400 South, and 11400 South. Several of the ditches (Nickle Ditch, Union & East Jordan Ditch, and Union & Jordan Ditch) are no longer used for irrigation but continue to receive and convey storm drainage flows. A portion of the City's drainage is also conveyed to Dry Creek, which is a major drainage that runs through the southern region of the City and is tributary to the Jordan River. Refer to the Storm Drain System Map for reference.

There are three major irrigation canals that flow from the south to the north through the western region of the City. These canals include Jordan & Salt Lake Canal, East Jordan Canal, and Sandy Canal. All three canals convey Utah Lake water from diversions on the Jordan River. Both Jordan & Salt Lake Canal and East Jordan Canal extend well to the north of the Sandy City northern boundary and convey water to several users throughout the Salt Lake Valley including Salt Lake City. Sandy Canal has historically delivered irrigation water to residents within Sandy City. It runs to the north and then turns sharply and runs directly west along 7800 South and ends at a dump out in the East Jordan Canal. Sandy Canal is now owned by Sandy City and is no longer used for irrigation flows. The City is in the process of converting the existing canal corridor into a trail system and re-routing all storm drains that previously outlet into the Canal.

Much of the City's drainage continues to drain into the Jordan & Salt Lake Canal and East Jordan Canal. There are diversion structures along both of the canals within Sandy City that allow water to be diverted out of the canals and into the City drainage conveyance systems during large storm events. The diverted water is eventually conveyed to the Jordan River. These diversions essentially route water previously diverted from the Jordan River mixed with drainage water back to the Jordan River.

LOCAL WATER QUALITY CONCERNS

The primary pollution sources in Sandy City come from residential and commercial property maintenance and construction activities. Sandy has very little industrial properties.

The residential property maintenance is not regulated via a city permit system so oversight is limited and management is primarily public outreach and education. Construction and commercial properties are a permitted activity and can be regulated effectively, although existing property will still be a challenge.

ONGOING DOCUMENTATION

The restructured SWMP has been reorganized to make it more of a working document posted on the City's storm water website. The SWMP includes several organized sections to help the City maintain records and documentation in an organized way. Much of the documentation will be included in the Documentation section of the SWMP.

As part of restructuring the SWMP, City staff have reviewed existing programs and assessed their effectiveness and contribution in achieving the desired results. As required by the permit, the City will at a minimum, conduct an annual review of the SWMP and assess needs for updates and changes to the SWMP. All updates to the SWMP will be documented and tracked and completed in accordance with permit requirements.

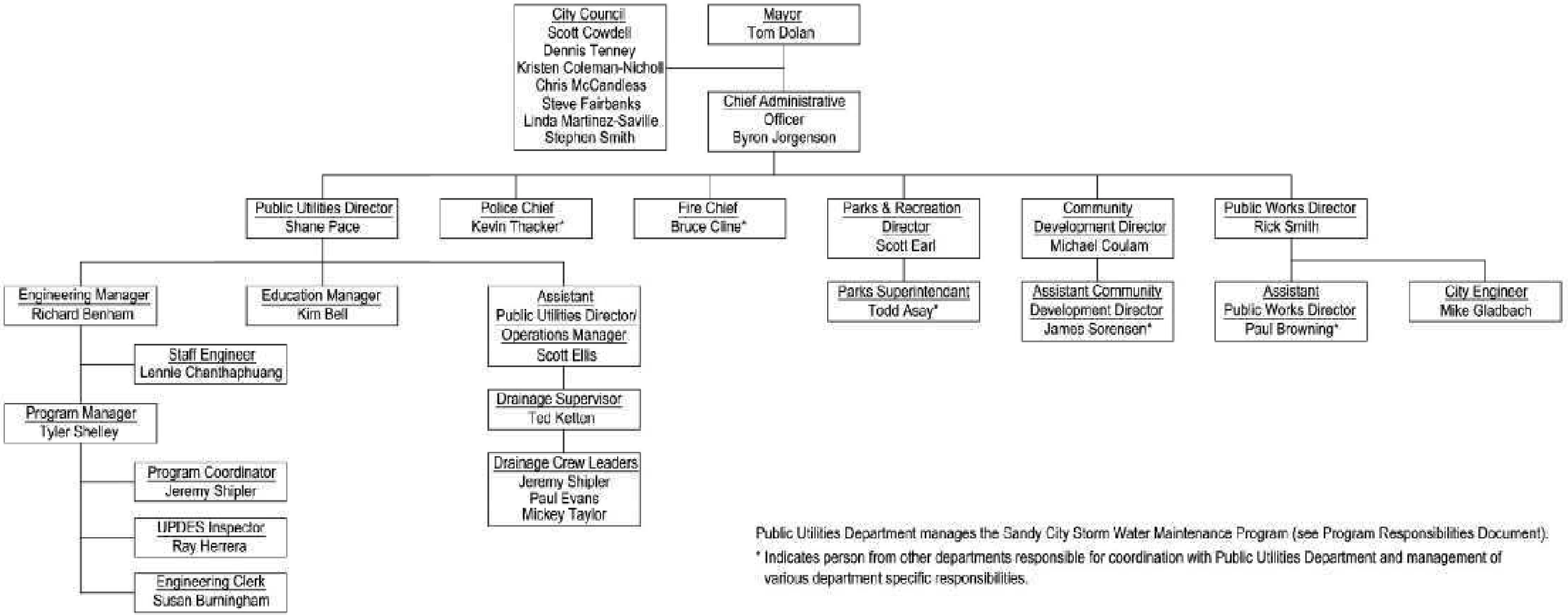
The restructured SWMP will assist the City in documenting and tracking activities performed and will more accurately indicate the current status and progress of the program. This updated SWMP includes many new forms and reports to help in the documentation efforts. Report forms, logs, evaluation forms and backup information is included in the SWMP.

SHARED RESPONSIBILITY

Sandy City has co-permitted with fourteen municipalities in the Salt Lake Valley, including Salt Lake County, in the Jordan Valley Municipalities Permit (No. UTS000001). An agreement and statement of accountability for the programs defines what is implemented by Salt Lake County. The agreement and statement of accountability is included in the Agreements Section.

ORGANIZATION CHART

SANDY CITY MS4 PROGRAM ORGANIZATION



Public Utilities Department manages the Sandy City Storm Water Maintenance Program (see Program Responsibilities Document).

* Indicates person from other departments responsible for coordination with Public Utilities Department and management of various department specific responsibilities.

PROGRAM RESPONSIBILITIES

Public Utilities Director

- Liaison with administration and City Council
- Involve Public Utilities Advisory Board (PUAB) in development of storm water programs
- General coordination of the Storm Water Management Program (SWMP)

Assistant Public Utilities Director

- General coordination of the SWMP
- Oversee maintenance and construction of the storm water system performed by City employees

Engineering Manager

- Program review and oversight
- Engineering support
- Coordination and review with Public Utilities Director and Assistant Public Utilities Director

Program Manager

- Oversee SWMP specifics and work with department heads
- Annual reports
- Update SWMP
- Oversee tracking and documentation of activities and actions
- Oversee database updates
- Engineering support
- Help with all reporting
- Oversee storm drain mapping
- Coordination with City Engineer
- Oversee participation in Salt Lake County Storm Water Coalition and Utah Storm Water Advisory Committee (USWAC)
- Development review

Staff Engineer

- Development review

Drainage Supervisor

- Manage construction and maintenance of the storm water system performed by City crews

Program Coordinator

- Participate in Salt Lake County Storm Water Coalition and USWAC
- Coordinate and assist with information published in City Newsletter/Annual Consumer Confidence Report and to distribute in utility billings
- Coordinate and assist with maintaining SWMP on City storm water website
- Assist in providing training to City employees

- Assist in coordination of City volunteer storm drain inlet marking program
- Assist in coordination efforts to verify mapping of storm drain facilities
- Participate in the storm water monitoring program
- Assist in identifying and developing suggested construction best management practices (BMPs)
- Assist in identifying and developing additional storm water related plans and specifications
- Maintain records of maintenance and inspections performed of private structural controls and coordinate inspections of private structural controls performed by City every 5 years
- Develop and maintain the City-Owned Facilities Storm Water System Maintenance Plan.
- Assist in developing and implementing standard operating procedures for construction, inspection, and maintenance performed by City personnel

Education Manager

- Participate in Salt Lake County Storm Water Coalition
- UPDES Media Campain
- Public and construction print media
- Coordinate and participate in County Water Quality Fair
- Coordinate to promote storm water awareness at Garden Fair at Sego Lily Gardens
- City employee training
- Volunteer storm drain inlet marking program and Sandy Pride Event

UPDES Inspector

- Participate in Salt Lake County Storm Water Coalition and USWAC
- Map outfalls
- Participate in storm water monitoring program
- SWPPP review
- Construction site inspection and enforcement

Engineering Clerk

- Tracking and documentation of activities and actions
- Preparation of annual reports
- Program support

IMPLEMENTATION SCHEDULE

Date	Program ID	Goal ID	Measurable Goal
3/5/2015	NA	NA	Post Draft SWMP on storm water website
3/11/2015	6.1	1	Develop an inventory of city-owned or operated facilities
3/13/2015	6.1	2	Assess inventory of city-owned or operated facilities and identify "high-priority" facilities
4/1/2015	6.1	7	Develop and implement Facility Inspection SOPs
4/1/2015	6.1	8	Update quarterly comprehensive inspection forms and prepare weekly visual and quarterly visual inspection forms
5/15/2015	3.3	2	Develop and implement updated IDDE SOPs
5/15/2015	3.4	3	Develop and implement a Receive Report and Response SOP and Spill Containment and Cleanup SOP
5/15/2015	4.2	1	Develop and implement a SWPPP and Development Plan Review SOP
5/15/2015	4.3	1	Develop and implement a Construction Site Management and Inspection SOP
5/15/2015	4.3	2	Develop and implement a Storm Water Enforcement SOP
5/15/2015	5.3	2	Develop and implement a Post-Construction Site Management and Inspection SOP
5/15/2015	5.3	3	Develop and implement a Post-Construction Structure Inspection SOP
5/15/2015	5.4	1	Develop and implement a Retrofit Existing Infrastructure SOP
5/15/2015	6.4	2	
5/15/2015	6.4	1	Develop and implement a Water Quality Consideration SOP
6/1/2015	3.3	1	Prioritize receiving waters, identify priority areas, and identify priority area inspection points
6/1/2015	6.2	1	Assess inventory of storm water system facilities and prioritize maintenance
6/1/2015	6.2	2	Prepare schedule for inspection, cleaning, and repair of storm water system facilities
6/1/2015	6.3	1	Develop and implement SOPs for maintaining the storm water system performed by City personnel
6/15/2015	3.4	2	Set up online system for reporting illicit discharges
6/15/2015	6.3	2	Develop and implement SOPs for general construction and maintenance performed by City personnel
7/1/2015	1.8	1	Prepare handouts for distribution with development applications, permit, and contracts
7/1/2015	3.2	1	Revise ordinance to include the descriptor "emergency" and to remove language that allows for non-storm water discharges not specifically provided for in the permit
7/1/2015	4.1	1	Update ordinances for construction related issues including requiring a SWPPP for sites disturbing less than 1 acre
7/1/2015	5.1	1	Update ordinances to require installation, maintenance, and inspection of long-term storm water structural controls, and consideration of LID and green infrastructure development approach
7/1/2015	5.3	1	Develop a standard for Post-Construction Storm Water Plan and Agreement for new development and redevelopment
7/1/2015	4.4	1	Develop suggested construction BMPs and post the BMPs on the storm water website
7/1/2015	6.1	3	Develop and implement site-specific storm water maintenance plans for high-priority facilities including facility specific SOPs/BMPs
7/1/2015	6.1	4	Review, update, and develop Spill Prevention Plans as necessary
8/1/2015	6.1	5	Develop an inventory of floor drains inside city-owned facilities
8/1/2015	6.1	6	Develop an inventory of storm drains on city-owned facility properties
11/15/2015	3.1	1	Map all outfalls
3/1/2016	5.2	1	Update and develop plans and specifications to specify required water quality control practices including LID and green infrastructure practices
5/1/2016	3.1	2	Map all city-owned or operated and existing private storm water post-construction structural controls that have been installed since January 1, 2003
2/1/2018	3.1	3	Verify existing public storm water system in preparation for a Storm Drain Master Plan Update